Abstract of the Disclosure:

The electronic generator power P_G is compared with a predetermined power range in order to set the torque of the synchronous generator of a wind energy installation. A choice between two control modes is made on the basis of the comparison, and a reference power P_G^* is determined that corresponds to the maximum power production. This reference power P_G^* is compared with the electrical generator power P_G, and a reference current I_E^* that is proportional to the power difference is produced and supplied to the field controller. The field controller draws power in a controlled manner from the capacitive DC voltage intermediate circuit as a function of the reference current I_E^*, and supplies this power to the excitation field. Changing the excitation field results in a change in the torque and hence in the rotational speed of the synchronous generator, which enables the two power values to be matched.

MPW/nt